NOVEMBER/DECEMBER 2024

23USEL33 — PCB DESIGN AND FABRICATION (SEC IV)

Time : Three hours Maximum : 75 marks

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SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is an integrated circuit (IC)?
2. Mention any two benefits of SMT.
3. What is meant by package density in PCB?
4. Draw the model PCB layout.
5. What is lamination coating?
6. Mention the role of photo resist in PCB.
7. What is PCB etching?
8. Why do we need a solder mask?
9. Expand CAD.
10. State the reflection of electromagnetic waves.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) List out the limitations of SMT.

Or

(b) Briefly explain the general artwork rules.

12. (a) State the layout rules for PCB design.

Or

(b) Describe the function of passive components.

13. (a) Outline different types of laminations in PCB process.

Or

(b) Enumerate the dry film resists.

14. (a) Explain principles of soldering.

Or

(b) Discuss the solder alloys.

15. (a) Write a short note reflection.

Or

(b) Outline the benefits of automation in PCB assembly.

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SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the single sided board and doubles sided board.

17. Explain the supply and ground conductions.

18. Interpret the basic printing process for double sided PCB's.

19. Investigate the etchant system.

20. Explain the automated artwork drafting.

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